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OTC Report 8202

Project Number EA-7703

An Investigation of Haloform Concentrations in
Ontario Drinking Water as Determined by the
DAI and Sparging Procedures

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Organic Trace Contaminants Section
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Ontario Ministry of the Environment

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Table of Contents

| | <u>Page</u> |
|--|-------------|
| Abstract | ii |
| Acknowledgements | iii |
| Introduction and Objectives | 1 |
| Experimental | 3 |
| 1) Sampling | 3 |
| 2) Analytical | 4 |
| a) Direct Aqueous Injection (DAI) Method | 4 |
| b) Sparging Method | 6 |
| Comparison of Analytical Methods: Results and Discussion | 8 |
| Comparison of Analytical Methods: Summary | 10 |
| Comparison of Analytical Methods: Conclusions and Recommendation | 10 |
| Appendix | 13 |

Introduction and Objectives

Volatile organohalides which include haloforms, or trihalomethanes, have been determined in Ontario drinking water supplies by the OTC Section for many years on a routine basis. The objective during this period was to establish approximate concentrations of these contaminants in drinking water at the numerous water treatment plants in Ontario and to monitor and record these levels in areas where large populations or high levels of these contaminants would make such work necessary or desirable.

The gas chromatographic method used for the determination of 5 volatile organohalides which comprise chloroform, bromodichloromethane and chlorodibromomethane as the haloforms, plus carbon tetrachloride and trichloroethylene, is carried out by the "Direct Aqueous Injection Method" (DAI). This method is well documented, published and widely used for the direct, efficient, and relatively inexpensive analysis of organohalides in large numbers of water samples, as required for the continuous monitoring of water quality in Ontario. Unlike any other analytical method, the DAI method permits a high sample throughput with an automatic sampling device by which daily up to 60 water samples are directly injected and quantitatively analysed with the use of a linear electron capture detector. To ensure instant volatilization of the injected water samples, a relatively high injection temperature (230°C) is required while the gas chromatographic column must be maintained at about 158°C for operation at optimum condition to separate the organohalide contaminants to be analyzed at the low ppb level.

While the usefulness of the DAI method for the fast and large-scale monitoring of the above organohalide concentrations remains well established, it has also been recognized that the chloroform levels in treated (chlorinated) water are usually somewhat higher when determined by this method than determined by the "Sparging" method. This latter method involves the gas sparging of the chloroform and other volatiles from the water sample at room temperature, followed by gas chromatographic separation, pyrolytic hydrogenation and determination by electrolytic conductivity measurements.

Although these higher results obtained by the DAI method have yet to be fully explained, experimental evidence indicates that during the chlorination of drinking water some potential, "non-volatile" chloroform, such as unidentified precursor

material, is generated which, upon heating to the high temperatures of the gas chromatograph under the DAI conditions, is thermally broken down to give additional free, volatile chloroform. Thus, dependent on the presence of such precursors in the treated water samples, chloroform concentrations above those of free, volatile chloroform can be expected to be formed by use of the DAI method.

In past years, with no haloform guidelines or maximum allowable levels for these compounds in existence, the levels established with the DAI method were generally considered of no great significance. It was only relatively recently, after the Ontario guideline for "Total Trihalomethane" (TTHM) concentration in drinking water was set at 350 ug/L, and after a few locations in Ontario were found to approach or even exceed this limit, that the need has arisen to re-appraise the DAI method for determining the free, "volatile" haloform concentrations only, and to establish if and by how much these concentrations are being overestimated in a given location. Thus, it is necessary to establish appropriate factors to relate the "total" haloform concentrations, as obtained by the DAI method, to concentrations of free volatile haloforms as defined and intended by the new guideline for drinking water. It was the aim of this investigation to establish a clear and more definitive interpretation of the results obtained by the DAI method opposite those obtained by the Sparging method, and the objectives were the following:

- 1) To compare results obtained by the DAI method for "total" haloform with those obtained by the Sparging method for "volatile" haloform, especially when using water samples from locations with high chloroform levels. To establish trends for possible consistency of the ratio of "total" to "volatile" haloform concentrations in these sampling locations.
- 2) To investigate whether satisfactory agreement is, in principle, attainable between two modes of the Sparging method, namely: a) the direct determination of "volatile" chloroform and b) the indirect determination of "volatile" chloroform by the "Difference" method, i.e. by subtraction of "non-volatile" chloroform (as determined in the sparging residue) from the "total" chloroform in the respective water samples. This investigation would not only be important as an analytical cross-check on "volatile" chloroform but also confirm that the more rapid "Difference" method (mode b) could be used whenever application of the Sparging method may be indicated.

- 3) To investigate the significance of bromochloromethanes and their contribution to "total" haloform concentrations and to the "volatile" haloform concentrations in the analysis of high-level samples. These bromochloromethanes being much less volatile than chloroform, could conceivably serve as indicators for chloroform losses from samples which may have occurred in the period between sampling and analysis by volatilization. Sampling and storage losses of the bromochloromethanes may be assumed as close to negligible, but their presence could be limited by the availability of bromide ions in the respective water source.
- 4) To establish a list of locations (water treatment plants) where high-levels of haloforms were observed during a survey covering the 5-year period from 1977 to 1981, inclusively, and to select for future sampling specifically those locations where these levels exceeded the 350 ug/L guideline. Water samples from these locations are then further monitored on a priority basis with special precautions as to the sampling and analytical procedures. The precautions serve the purpose of ensuring that the analytical results represent indeed the "volatile" haloform concentrations as they existed at the sampling point. Therefore, careful preservation of the sample content from the sampling point to the sample injection for analysis is essential.

Experimental

Although this investigation is intended to be mainly concerned with analytical questions, a short description of the sample collection, transport and storage conditions appears to be necessary since any loss of volatile contaminants during this period would have an influence on the analytical results. The samples in this investigation had been collected and, prior to analysis, kept under the same general conditions as had all water samples during the past years of organohalide surveys.

1) Sampling

The water samples were collected in 200 ml glass bottles (bacti bottles, as used for microbiological sampling), equipped with aluminum foil-lined screw caps. According to instructions, these sampling bottles were filled to overflowing (while avoiding splashing or any other kind of excessive aeration) and then closed tightly. This procedure was intended to minimize headspace formation by which portions of

volatile contaminants could conceivably diffuse from the aqueous phase and thus, escape on opening of the sample bottle for analysis.

The collected samples were shipped to the laboratory where they were promptly placed under refrigeration (about 5°C) until analysis could be performed. Only immediately prior to analysis were the bottles allowed to reach room temperature and were then opened for withdrawal of sample aliquots. These were transferred by disposable glass pipettes (at atmospheric pressure) to hypo-vials for automatic sample injection into the gas chromatograph.

For routine survey work, usually 4 types of water samples are submitted to the laboratory for analysis of volatile organohalides:

- a) "Raw water" which has not been subjected to any chlorination treatment.
- b) Chlorinated or "treated" water which contains residual chlorine and is not quenched with sodium thiosulphate as the reducing agent.
- c) Chlorinated quenched water, containing no residual chlorine after the addition of sodium thiosulphate as the reducing agent.
- d) Distribution water which is sampled "downstream" from the water treatment area and close to consumers of the water. The residual chlorine concentration in distribution water is generally much lower than in the respective freshly treated water due to extended periods of air exposure (aeration) and decay by chemical reaction.

For the purpose of the investigation on determining "free" and "total" haloform (the latter including potential "precursor-derived" haloform), the distribution system was chosen as source for water samples from locations where high haloform levels have already been established (by the DAI method).

2) Analytical

- a) Direct Aqueous Injection (DAI) Method:

All water samples submitted for volatile organohalide analysis are subjected to the DAI method of analysis. There are 5 of these compounds which were analyzed

routinely by this method: Chloroform, carbon tetrachloride, trichloroethylene, bromodichloromethane and chlorodibromomethane. As the sixth compound, tetrachloroethylene had been added within the last 2 years of regular survey work.

The instrument by which this analysis is carried out is a Varian Gas Chromatograph, Model 2440, equipped with a scandium tritide electron capture detector, a Varian Autosampler, Model 8000, and a recorder coupled to an Autolab, System IV, Electronic Integrator. The autosampler has a capacity for 60 sample vials of 2 mL volume each and equipped with a septum. The associated automatic injection device permits adequate syringe flushing with the respective water sample prior to the automatic sample injection. The injection volume is 9 μ L and a 20-minute analysis time is used for each of the consecutive sample injections.

The gas chromatographic column used is a 9 ft (2.7 m) x $\frac{1}{8}$ inch (2 mm I.D.) glass column packed with Chromosorb 101 (60/80 mesh). The injector is operated at 230°C, the detector is at 290°C and the column oven temperature is maintained isothermally at 158°C. The flow rate of the nitrogen carrier gas is 30 ml/minute. Retention times and detection limits for the organohalides analyzed are shown in Table 1.

Table 1

Retention Times and Detection Limits by the DAI Method

| <u>Compound</u> | <u>Retention Time</u> <u>Minutes</u> | <u>Detection Limits *)</u> <u>ug/L</u> |
|----------------------|---|---|
| Chloroform | 3.1 | 1 |
| Carbon Tetrachloride | 4.5 | 0.1 |
| Trichloroethylene | 5.1 | 2 |
| Bromodichloromethane | 6.5 | 0.5 |
| Tetrachloroethylene | 10.8 | 0.5 |
| Chlorodibromomethane | 13.5 | 1 |

*) Detection limit = 2 x noise level

The 2 mL glass vials for automatic sample injection are filled to just over 1 mL with the respective water samples, or the proposed standard solutions, by using disposable glass pipettes without application of suction. After closing the glass

vials tightly with screw-caps in which Teflon-lined septa are inserted, the vials are placed into the autosampler for injection into the gas chromatograph. In order to check for the possibility of a "carry over", intermittently placed vials of distilled "millipore" water between sample vials serve as controls. At the beginning of each day on which water samples are analyzed, freshly prepared standard mixtures of the organohalides at concentrations of 10, 30, 50, 100, 150 and 200 ug/L are used for calibration of the gas chromatographic response. Subsequently, after each series of 8 samples are run through the gas chromatograph, the 50 ug/L standard mixture is injected to ensure consistency of the gas chromatographic performance throughout the day.

While the identities of the organohalides are determined by the gas chromatographic retention times, the quantitation of these compounds is accomplished by integration of the respective peak areas on the gas chromatogram and their correlation with the peak areas of the standard mixtures. A Hewlett Packard Calculator-Plotter, Model 9830, is used for determining the organohalide concentrations in the sample by taking into account the slightly non-linear detector response obtained over the concentration range of the organohalide calibration standards. The inclination (slope) of the calibration curves obtained from the organohalide standards serves as an indication of detector sensitivity within the concentration range tested. The sensitivity of the electron capture detector is checked each day when analyses are carried out and serves at the same time as a test for leaks in the gas chromatographic system.

b) Sparging Method:

The method by which volatile organohalides, particularly chloroform, is sparged with an inert gas from water samples, and subsequently determined after gas chromatographic separation, is referred to as the Sparging method. This fairly complex method consists of the following steps:

- i) Gas Sparging: Into a Pyrex glass vessel of about 15 mL capacity, a 5 mL water sample is injected with a glass hypodermic syringe and is sparged at room temperature, via a sintered glass inlet at the bottom, with helium gas onto a gas chromatographic column. Care is being taken to ensure that the volatile chloroform is quantitatively removed from the sparging vessel by

standardizing the necessary sparging time (about 10 to 12 minutes). This is accomplished by subjecting standard mixtures to a sparging time necessary for the removal of all "free" chloroform from the aqueous residues (as determined by the DAI method). The less volatile organohalides, however, are not completely removed during the specified sparging time for chloroform in order to keep the loss of water by evaporation at a minimum when subsequently determining non-volatile, precursor-derived chloroform in the water sample residues.

- ii) Gas Chromatographic Separation: A Varian 2100 gas chromatograph, containing a 6 ft (1.8 m) x 1/8 inch glass column (2 mm I.D.), packed with Chromosorb 101 (60/80 mesh), is used for analysis. The organohalides, sparged from the aqueous samples with helium onto the head of the gas chromatographic column at room temperature, are chromatographically separated by raising the temperature of the column oven to 150°C at the rate of 20°C/minute followed by programming the temperature from 150°C to 200°C at 4°C/minute.
- iii) Pyrolytic Hydrogenation: The effluent from the column is analysed by a Hall electrolytic conductivity detector, operating in the chlorine mode. The furnace of the Hall detector is mounted directly over the detector base, and the quartz pyrolysis tube is attached to the base in place of the flame tip. The hydrogen is introduced at the detector base at a rate of 40 mL/minute. The pyrolysis oven temperature is maintained at 800°C. The electrolyte solution used is a mixture of 10% isopropanol and 90% water, by volume.
- iv) Determination: The responses of the Hall detector to the generated hydrogen chloride (which is being dissolved in the isopropanol solution and passed through the detector) are plotted by a recorder to give a chromatogram. By measuring the peak heights obtained from a sample and correlating them with the peak heights from freshly prepared standard mixtures, quantitation of the corresponding organohalides in the sample is accomplished. Under the sparging conditions used, only the free chloroform in the sample can be quantitatively determined while the less volatile organohalides would give results only to the extent of their volatilization during the specified sparging

period. For quantitatively determining these latter organohalides, appropriately longer sparging times are required.

Comparison of Analytical Methods: Results and Discussion

For the purpose of evaluating the DAI method (by which the total of "volatile" haloform and "non-volatile" or "precursor-derived" haloform is determined), a study was undertaken to establish to what extent this method over-estimates the "volatile" haloform concentrations. This study has become necessary with the recent introduction of an Ontario drinking water standard of 350 ug/L maximum haloform concentration which presently is defined as representing only the "volatile" haloform concentration and thus, excludes "precursor-derived" haloform.

For the purpose of this study, Ontario drinking water samples were analyzed which originated from various sources close to the consumers. These samples of so-called "Distribution Water" had been selected from locations with known high levels of haloform, i.e. specifically of chloroform as being by far the most predominant haloform found in treated (chlorinated) drinking water.

In order to ascertain that in compliance with the drinking water guidelines only "volatile" haloform would be determined, the samples were sparged at room temperature by the afore-mentioned gas-sparging method of analysis. By this method, the "volatile" chloroform could be determined both directly, as outlined, and indirectly by the difference of the chloroform concentrations before and after sparging. While both of these methods for "volatile" chloroform should give close to identical results, some difference could be expected by comparing these results with the results obtained by the DAI method from the original water sample. The extent of these differences within a sampling location would then readily indicate the "non-volatile" portion of chloroform and thus, the level of precursor material at that particular location as compared to other locations.

The analytical results from this study are summarized in the Appendix, Tables A1 to A63. In the upper part of these Tables, the concentrations of DAI-determined "Total" organohalides are shown in ug/L (or as 100% in the sample). Further below are shown the respective concentrations for DAI-determined "Residue" or "Non-Volatile" organohalides which remained in the samples after the gas sparging

procedure. Further below in the Tables, the "Sparged Volatiles" concentrations of organohalides are shown and, finally, the "Volatiles by Difference" as established before and after the sparging procedure. The chloroform concentrations determined by these two (sparging) procedures could be expected to be very similar since they both represent "volatile" chloroform only.

In order to summarize and facilitate evaluation of the results from this analytical study, the expressions at the bottom of these Tables indicate the following:

- a) The ratio of "DAI (Sample)" or total chloroform to "Sparged Volatile" chloroform would be unity (or 1) in the absence of "non-volatile" chloroform. Higher values would indicate that the total chloroform (DAI-method) included certain amounts of "non-volatile" (precursor-derived) chloroform.
- b) The sum of "Sparged Volatiles" plus "DAI-Residue" (for "non-volatile" chloroform) should be identical with the total chloroform "DAI-Sample" shown in the top part of the Tables. A comparison of the two figures would reflect on the reliability of the methods used to complement each other in determining "volatile" and "non-volatile" chloroform.
- c) The ratio of the afore-mentioned sum to the "Sparged Volatile" chloroform (at the bottom-right of the Tables) should be identical to the ratio shown under a) and verify the respective chloroform determinations.

It should be noted that the analyses for each sample by using the DAI and the Sparging methods were usually carried out within one to several day intervals between these methods. These delays were caused by the necessity to first analyze a considerable number of samples by the DAI method until one with sufficiently high haloform levels could be found to warrant analysis by the much more time-consuming Sparging method. However, during these intervals, some loss of "volatile" chloroform may have occurred by the repeated opening of sample bottles as required for the consecutive withdrawals of aliquots for gas chromatographic injections.

Comparison of Analytical Methods: Summary

- 1) For this particular part of the study, a total of 63 water samples from the Distribution System of drinking water supplies in all 6 Regions were analyzed by both the DAI and the Gas Sparging methods. The samples were selected from those routinely submitted in May, June and July 1981, with chloroform levels ranging generally from 40 to 300 ug/L, as determined by the DAI method. By this method, the "total" haloform concentrations, including "volatile" as well as "non-volatile" (precursor-derived) chloroform, were determined. There were also 4 samples with unusually high chloroform levels (between 400 and 1520 ug/L) included in this study, which originated from Brantford, Lindsay and Frankford.
- 2) The "volatile" chloroform concentrations were determined directly by the Sparging method but also indirectly by subtraction of the "residual" (non-volatile) chloroform of the sparged aqueous sample from the "total" chloroform (determined by the DAI method) in the original sample. All haloform concentrations are shown in the Appendix, Tables A1 to A63, in both ug/L and in % of "total" haloform.
- 3) The ratios of "total" to sparged "volatile" chloroform concentrations are shown at the bottom of these Tables, which indicate the relative and absolute concentrations of "volatile" and "non-volatile" chloroform in each sample.
- 4) Owing to the relatively low concentrations of bromodichloromethane compared with the vastly predominant chloroform in all samples analyzed, no attempts were made to quantitatively separate the "volatile" from the "non-volatile" portion of bromodichloromethane. Such quantitations would have required additional analyses by the Sparging method (using extended gas sparging times) but would have hardly contributed anything to this study.

Comparison of Analytical Methods: Conclusions and Recommendation

- 1) In all of the 63 water samples analyzed, the "total" chloroform concentrations (as determined by the DAI method) were either equal to, or larger, than the "volatile" chloroform concentrations (as determined by the

Sparging method). Specifically, the ratios of "total" chloroform to sparged "volatile" chloroform concentrations were found to range between unity and 2.0 for all samples analyzed with the exception of 2 samples (Frankford and Victoria Harbour). This means that the "volatile" chloroform ranged generally between the extremes of 50 and 100% of the "total" chloroform although more commonly, the range for "volatile" chloroform appeared to be much narrower at about 70 to 85% of the "total".

- 2) When water samples collected at the same locations but at different dates were analyzed, the ratios of "total" to "volatile" chloroform concentrations tended to stay within relatively narrow ranges, as was apparent at the following locations: Bancroft (1.22 to 1.57), Bobcaygeon (1.12 to 1.40), Madsen (1.09 to 1.43), Odessa (1.05 to 1.10), Peterborough (1.08 to 1.11), Rainy River (1.43 to 1.46). Seasonal variations have not been investigated in this comparative study.

Expressed in percent "volatile" chloroform (based on "total" chloroform concentrations), the ranges were: Bancroft 64-82%; Bobcaygeon 71-89%; Madsen 70-91%; Odessa 91-95%; Peterborough 89-93%; Rainy River 68-70%. These results seem to suggest that while considerable differences in the relative proportions of "volatile" chloroform may have existed between various locations in Ontario, much less variation of these proportions are found in samples taken from the same location (over the test period of about 3 months).

- 3) The "volatile" chloroform concentration determined by the direct analysis of sparged chloroform, was found generally to be in good agreement with the "volatile" chloroform concentration obtained indirectly by the difference of "total" chloroform minus residual or "non-volatile" chloroform after sparging. This result is important not only from a confirmatory viewpoint but, particularly, also by the fact that the "indirect" Sparging method for "volatile" chloroform permits analysis of about 10 times more samples per time unit than the "direct" Sparging method. In addition, the indirect Sparging method can be readily automated, such as for night-time operation largely without use of manpower, while the direct Sparging method requires the continuous and attentive work of specially trained personnel.

- 4) In consideration of the upper-limit guideline of 350 ppb total trihalomethane concentration in Ontario drinking water, the following course of action for monitoring large numbers of samples is suggested: a) To subject all samples to the haloform analysis by the DAI method; b) To select those samples with high chloroform concentrations, such as above 300 ppb, for subsequent analyses by either of the two Sparging methods.

Since the DAI method was shown to give "total" chloroform concentrations equal to, or higher, than the "volatile" chloroform concentrations in all cases investigated, there should be no need to analyze the samples with lower levels by the much more time-consuming Sparging method. Thus, the DAI method would remain the method of choice for the analysis of all samples except those showing critically high haloform concentrations.

Appendix

The experimental results obtained by the DAI and Sparging methods for determining volatile organohalides in Ontario drinking water samples are shown on pages A1 to A63.

Location, Region: Alexandria, S.E.

Source: Distribution System

Water Sample Number: 1337

Sampling Date: 6/7/81

| Date Analyzed (1981) | 13/7 ug/L | 15/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 113 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 8 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 40 | 35 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 76 | 67 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 73 | 65 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.49 | 116 | | 1.52 |

Location, Region: Bancroft, S.E.

Source: Distribution System

Water Sample Number: 1001

Sampling Date: 19/5/81

| Date Analyzed (1981) | 14/7 ug/L | 3/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 186 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 4 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 57 | 31 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 118 | 63 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 129 | 69 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.58 | 175 | | 1.48 |

Location, Region: Bancroft, S.E.

Source: Distribution System

Water Sample Number: 1087

Sampling Date: 25/5/81

| Date Analyzed (1981) | 16/6 ug/L | 18/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 194 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 4 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 39 | 20 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 175 | 90 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 155 | 80 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 75 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.11 | 214 | | 1.22 |

Location, Region: Bancroft, S.E.

Source: Distribution System

Water Sample Number: 1143

Sampling Date: 1/6/81

| Date Analyzed (1981) | 18/6 ug/L | 22/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 168 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 5 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 66 | 39 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 2 | 40 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 115 | 68 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 102 | 61 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 3 | 60 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.46 | 181 | 1.57 | |

Location, Region: Bancroft, S.E.

Source: Distribution System

Water Sample Number: 1539

Sampling Date: 29/6/81

| Date Analyzed (1981) | 23/7 ug/L | 24/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 148 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 4 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 33 | 22 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 1 | 25 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 128 | 86 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 25 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 115 | 78 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 3 | 75 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.16 | 161 | 1.26 | |

Location, Region: Bancroft, S.E.

Source: Distribution System

Water Sample Number: 1369

Sampling Date: 7/7/81

| Date Analyzed (1981) | 15/7 ug/L | 23/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 177 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 5 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 40 | 23 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 129 | 73 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 137 | 77 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 60 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.37 | 169 | | 1.31 |

Location, Region: Bancroft, S.E.

Source: Treated, Blue Bottle

Water Sample Number: 1367

Sampling Date: 7/7/81

| Date Analyzed (1981) | 15/7 ug/L | 20/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 155 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 4 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 30 | 24 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 137 | 88 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 118 | 76 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 75 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.13 | 167 | | 1.22 |

Location, Region: Bancroft, S.E.

Source: Distribution System

Water Sample Number: 1561

Sampling Date: --

| Date Analyzed (1981) | 7/8 ug/L | 11/8 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------------|--|
| CHCl ₃ | 180 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 4 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 36 | 20 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 1 | 25 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 142 | 79 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 25 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 144 | 80 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 3 | 75 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.27 | 178 | | 1.25 |

Location, Region: Bancroft, S.E.

Source: Distribution System

Water Sample Number: 1600

Sampling Date: 27/7/81

| Date Analyzed (1981) | 4/8 ug/L | 12/8 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 215 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 5 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 50 | 23 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 156 | 73 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 165 | 77 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 60 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.38 | 206 | | 1.32 |

Location, Region: Beaverton, Central

Source: Distribution System

Water Sample Number: 1389

Sampling Date: 7/7/81

| Date Analyzed (1981) | 16/7 ug/L | 20/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 42 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 11 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 2 | 5 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 18 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 41 | 98 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 7 | 64 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 40 | 95 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 9 | 82 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.02 | 43 | | 1.05 |

Location, Region: Belleville, S.E.

Source: Distribution System

Water Sample Number: 1163

Sampling Date: 2/6/81

| Date Analyzed (1981) | 14/7 ug/L | 8/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 124 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 10 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 57 | 46 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 8 | 80 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 74 | 60 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 20 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 67 | 54 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 20 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.68 | 131 | | 1.77 |

Location, Region: Belleville, S.E.

Source: Distribution System

Water Sample Number: 1450

Sampling Date: 7/7/81

| Date Analyzed (1981) | 24/7 ug/L | 30/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 137 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 8 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 14 | 10 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 124 | 91 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 5 | 63 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 123 | 90 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 75 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.10 | 138 | | 1.11 |

Location, Region: Bobcaygeon, Central

Source: Distribution System

Water Sample Number: 896

Sampling Date: 5/5/81

| Date Analyzed (1981) | 11/6 ug/L | 12/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 179 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 5 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 49 | 27 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 2 | 40 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 121 | 68 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 130 | 73 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 3 | 60 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.48 | 170 | | 1.40 |

Location, Region: Bobcaygeon, Central

Source: Distribution System

Water Sample Number: 1552

Sampling Date: 2/6/81

| Date Analyzed (1981) | 23/7 ug/L | 28/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 168 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 8 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 18 | 11 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 3 | 38 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 150 | 89 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 38 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 150 | 89 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 5 | 62 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.12 | 168 | | 1.12 |

Location, Region: Bobcaygeon, Central

Source: Distribution System

Water Sample Number: 1543

Sampling Date: 30/6/81

| Date Analyzed (1981) | 23/7 ug/L | 24/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 257 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 12 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 70 | 27 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 6 | 50 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 178 | 69 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 25 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 187 | 73 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 6 | 75 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.44 | 248 | | 1.39 |

Location, Region: Brantford, W.C.

Source: Distribution System

Water Sample Number: 282

Sampling Date: --

| Date Analyzed (1981) | 26/6 ug/L | 17/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|---|
| CHCl ₃ | 589 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 33 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 194 | 19 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 11 | 33 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 462 | 78 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 21 | 64 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 395 | 67 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 22 | 70 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.27 | 656 | 1.42 | |

Location, Region: Casselman, S.E.

Source: Distribution System

Water Sample Number: 1203

Sampling Date: 2/6/81

| Date Analyzed (1981) | 23/6 ug/L | 24/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 141 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 22 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 11 | 8 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 27 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 134 | 95 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 8 | 36 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 130 | 92 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 16 | 73 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.05 | 145 | | 1.08 |

Location, Region: Chapleau, N.E.

Source: Distribution System

Water Sample Number: 698

Sampling Date: 4/5/81

| Date Analyzed (1981) | 29/5 ug/L | 8/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 100 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 3 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 58 | 58 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 2 | 67 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 49 | 49 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 42 | 42 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 1 | 33 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 2.04 | 107 | | 2.18 |

Location, Region: Chapleau, N.E.

Source: Distribution System

Water Sample Number: 1167

Sampling Date: 2/6/81

| Date Analyzed (1981) | 22/6 ug/L | 26/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 157 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 2 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 32 | 20 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 143 | 91 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 125 | 80 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.10 | 175 | | 1.22 |

Location, Region: Cobden, S.E.

Source: Distribution System

Water Sample Number: 1327

Sampling Date: 6/7/81

| Date Analyzed (1981) | 13/7 ug/L | 15/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|-------------------------|-------------------|--|
| CHCl ₃ | 98 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 9 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 37 | 38 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 5 | 56 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 63 | 64 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 11 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 61 | 62 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 44 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | Sp. Volat. + DAI (Res.) | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.56 | 100 | | 1.59 |

Location, Region: Deseronto, S.E.

Source: Distribution System

Water Sample Number: 1447

Sampling Date: 7/7/81

| Date Analyzed (1981) | 24/7 ug/L | 29/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 150 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 10 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 11 | 7 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 2 | 20 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 143 | 95 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 60 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 139 | 93 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 8 | 80 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.05 | 154 | | 1.08 |

Location, Region: Dresden, S.W.

Source: Distribution System

Water Sample Number: 800

Sampling Date: 15/5/81

| Date Analyzed (1981) | 5/6 ug/L | 11/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 121 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 13 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 2 | | 100 | |
| CHCl ₃ | | 4 | 3 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 15 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | -- | |
| CHCl ₃ | | 97 | 80 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 9 | 69 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | -- | |
| CHCl ₃ | | 117 | 97 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 11 | 85 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 2 | 100 | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.03 | 101 | | 1.04 |

Location, Region: Ear Falls, N.W.

Source: Distribution System

Water Sample Number: 820

Sampling Date: 4/5/81

| Date Analyzed (1981) | 8/6 ug/L | 10/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 217 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 6 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 86 | 40 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 67 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 118 | 54 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 17 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 131 | 60 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 33 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.84 | 204 | | 1.73 |

Location, Region: Eganville, S.E.

Source: Distribution System

Water Sample Number: 1361

Sampling Date: 7/7/81

| Date Analyzed (1981) | 15/7 ug/L | 17/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 104 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 3 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 13 | 12 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 33 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 94 | 90 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 91 | 88 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 66 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.11 | 107 | | 1.14 |

Location, Region: Emo, N.W.
 Source: Distribution System
 Water Sample Number: 1079
 Sampling Date: 1/6/81

| Date Analyzed (1981) | 16/6 ug/L | 18/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 156 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 8 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 54 | 35 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 98 | 63 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 102 | 65 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 75 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.59 | 152 | | 1.55 |

Location, Region: Fort Francis, N.W.

Source: Distribution System

Water Sample Number: 548

Sampling Date: 6/4/81

| Date Analyzed (1981) | 26/6 ug/L | 1/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 232 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 9 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 112 | 48 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 5 | 56 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 157 | 68 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 120 | 52 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 44 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.48 | 269 | | 1.71 |

Location, Region: Fort Francis, N.W.

Source: Distribution System

Water Sample Number: 892

Sampling Date: 4/5/81

| Date Analyzed (1981) | 10/6 ug/L | 11/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 104 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 5 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 9 | 9 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 1 | 20 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 102 | 98 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 95 | 91 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 4 | 80 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.02 | 111 | | 1.09 |

Location, Region: Fort Francis, N.W.

Source: • Distribution System

Water Sample Number: 1416

Sampling Date: 7/7/81

| Date Analyzed (1981) | 17/7 ug/L | 21/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|---|
| CHCl ₃ | 77 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 3 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 9 | 12 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 1 | 33 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 69 | 90 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 68 | 88 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 2 | 67 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.12 | 78 | 1.13 | |

Location, Region: Frankford, S.E.

Source: Distribution System

Water Sample Number: 312

Sampling Date: --

| Date Analyzed (1981) | 26/6 ug/L | 17/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 1523 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 68 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 1377 | 90 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 79 | 116 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 3 | -- | |
| CHCl ₃ | | 238 | 16 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 146 | 10 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 0 | | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 6.40 | 1615 | | 6.79 |

Location, Region: Harrow, S.W.

Source: Distribution System

Water Sample Number: 1315

Sampling Date: 6/7/81

| Date Analyzed (1981) | 10/7 ug/L | 15/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 82 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 18 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 5 | | 100 | |
| CHCl ₃ | | 29 | 35 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 7 | 39 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 3 | 60 | |
| CHCl ₃ | | 62 | 76 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 11 | 61 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | -- | |
| CHCl ₃ | | 53 | 65 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 11 | 61 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 2 | 40 | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.32 | 91 | | 1.47 |

Location, Region: Hearst, N.E.

Source: Distribution System

Water Sample Number: 659

Sampling Date: 7/4/81

| Date Analyzed (1981) | 26/5 ug/L | 3/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 145 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 1 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 40 | 28 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 0 | -- | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 106 | 73 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 105 | 72 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 1 | 100 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.37 | 146 | 1.38 | |

Location, Region: Hearst, N.E.

Source: Distribution System

Water Sample Number: 792

Sampling Date: 5/5/81

| Date Analyzed (1981) | 5/6 ug/L | 11/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------------|--|
| CHCl ₃ | 132 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 1 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 14 | 11 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 0 | -- | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 76 | 58 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 118 | 89 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 1 | 100 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.74 | 90 | | 1.18 |

Location, Region: Iroquois Falls, N.E.

Source: Distribution System

Water Sample Number: 1307

Sampling Date: 6/7/81

| Date Analyzed (1981) | 10/7 ug/L | 13/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|-------------------------|-------------------|--|
| CHCl ₃ | 121 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 4 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 38 | 31 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 75 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 87 | 42 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 83 | 69 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 25 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | Sp. Volat. + DAI (Res.) | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.39 | 125 | | 1.44 |

Location, Region: Kenora, N.W.

Source: Distribution System

Water Sample Number: 1493

Sampling Date: 6/7/81

| Date Analyzed (1981) | 31/7 ug/L | 5/8 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 115 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 7 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 14 | 12 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 4 | 57 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 74 | 64 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 14 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 101 | 88 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 3 | 43 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.55 | 88 | | 1.19 |

Location, Region: Lindsay, Central

Source: Distribution System

Water Sample Number: 387

Sampling Date: 6/4/81

| Date Analyzed (1981) | 1/6 ug/L | 1/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|-------------------------|-------------------|--|
| CHCl ₃ | 267 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 9 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 131 | 49 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 44 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 135 | 51 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 136 | 51 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 5 | 56 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | Sp. Volat. + DAI (Res.) | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.98 | 266 | | 1.96 |

Location, Region: Lindsay, Central

Source: Distribution System

Water Sample Number: 702

Sampling Date: 4/5/81

| Date Analyzed (1981) | 29/5 ug/L | 3/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 436 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 22 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 140 | 32 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 7 | 32 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 354 | 81 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 10 | 45 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 296 | 68 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 15 | 68 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.23 | 494 | | 1.40 |

Location, Region: Lindsay, Central

Source: Distribution System

Water Sample Number: 989

Sampling Date: 25/5/81

| Date Analyzed (1981) | 14/7 ug/L | 7/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 648 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 19 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | | | |
| C ₂ HCl ₃ | | | 29 (Calc.) | DAI (Residue) |
| CHCl ₂ Br | | | 37 (Calc.) | or |
| C ₂ Cl ₄ | | | | "Non-Volatiles" |
| CHClBr ₂ | | | | |
| CHCl ₃ | | 459 | 71 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 12 | 63 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | N.A. | N.A. | |
| C ₂ HCl ₃ | | | | Volatiles by "Difference" |
| CHCl ₂ Br | | N.A. | N.A. | or |
| C ₂ Cl ₄ | | | | DAI (Sample) - |
| CHClBr ₂ | | | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.41 | | | |

Location, Region: Madsen, N.W.

Source: Distribution System

Water Sample Number: 498

Sampling Date: 6/4/81

| Date Analyzed (1981) | 23/4 ug/L | 3/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 264 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 10 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 62 | 23 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 143 | 54 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 202 | 77 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 60 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.85 | 205 | | 1.43 |

Location, Region: Madsen, N.W.

Source: Distribution System

Water Sample Number: 768

Sampling Date: 3/5/81

| Date Analyzed (1981) | 9/6 ug/L | 8/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 144 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 9 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 32 | 22 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 44 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 130 | 90 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 22 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 112 | 78 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 5 | 56 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.11 | 162 | | 1.25 |

Location, Region: Madsen, N.W.

Source: Distribution System

Water Sample Number: 1357

Sampling Date: 6/7/81

| Date Analyzed (1981) | 15/7 ug/L | 17/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 167 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 10 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 14 | 8 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 148 | 89 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 10 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 153 | 92 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 60 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.13 | 162 | | 1.09 |

Location, Region: Marmora, S.E.

Source: Distribution System

Water Sample Number: 1408

Sampling Date: 8/7/81

| Date Analyzed (1981) | 22/7 ug/L | 21/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 74 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 2 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 5 | 7 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 0 | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 74 | 100 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 69 | 93 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 100 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.00 | 79 | | 1.07 |

Location, Region: Mitchell's Bay, S.W.

Source: Distribution System

Water Sample Number: 1443

Sampling Date: 8/7/81

| Date Analyzed (1981) | 24/7 ug/L | 29/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 72 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 19 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 5 | | 100 | |
| CHCl ₃ | | 14 | 19 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 6 | 32 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 4 | 80 | |
| CHCl ₃ | | 49 | 68 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 13 | 68 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | ND | -- | |
| CHCl ₃ | | 58 | 81 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 13 | 68 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 1 | 20 | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.47 | 63 | | 1.29 |

Location, Region: Napanee, S.E.

Source: Distribution System

Water Sample Number: 1353

Sampling Date: --

| Date Analyzed (1981) | 15/7 ug/L | 17/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|---|
| CHCl ₃ | 145 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 8 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 19 | 13 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 2 | 25 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 134 | 92 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 75 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 126 | 87 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 6 | 75 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.08 | 153 | | 1.14 |

Location, Region: Odessa, S.E.

Source: Distribution System

Water Sample Number: 832

Sampling Date: 5/5/81

| Date Analyzed (1981) | 8/6 ug/L | 10/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 140 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 15 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 12 | 9 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 27 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 121 | 86 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 8 | 53 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 128 | 91 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 11 | 73 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.16 | 133 | | 1.10 |

Location, Region: Odessa, S.E.

Source: Distribution System

Water Sample Number: 1207

Sampling Date: 2/6/81

| Date Analyzed (1981) | 23/6 ug/L | 24/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 145 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 19 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 3 | | 100 | |
| CHCl ₃ | | 6 | 4 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 2 | 11 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | ND | -- | |
| CHCl ₃ | | 131 | 90 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 13 | 68 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | ND | -- | |
| CHCl ₃ | | 139 | 96 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 17 | 89 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 3 | 100 | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.11 | 137 | | 1.05 |

Location, Region: Odessa, S.E.

Source: Distribution System

Water Sample Number: 1477

Sampling Date: 7/7/81

| Date Analyzed (1981) | 30/7 ug/L | 4/8 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 223 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 23 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 3 | | 100 | |
| CHCl ₃ | | 22 | 10 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 6 | 26 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | -- | |
| CHCl ₃ | | 226 | 101 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 20 | 87 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | -- | |
| CHCl ₃ | | 201 | 90 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 17 | 74 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 3 | 100 | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 0.99 | 248 | | 1.10 |

Location, Region: Ottawa-Lemieux Is., S.E.

Source: Distribution System

Water Sample Number: 1424

Sampling Date: 8/7/81

| Date Analyzed (1981) | 29/7 ug/L | 31/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 81 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 1 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 10 | 12 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 81 | 100 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 71 | 88 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 100 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.00 | 91 | | 1.12 |

Location, Region: Pembroke, S.E.

Source: Distribution System

Water Sample Number: 1171

Sampling Date: 2/6/81

| Date Analyzed (1981) | 14/7 ug/L | 8/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 116 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 3 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | | | |
| C ₂ HCl ₃ | | | 27 (Calc.) | DAI (Residue) |
| CHCl ₂ Br | | | | or |
| C ₂ Cl ₄ | | | | "Non-Volatiles" |
| CHClBr ₂ | | | | |
| CHCl ₃ | | 85 | 73 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | N.A. | N.A. | |
| C ₂ HCl ₃ | | | | Volatiles by "Difference" |
| CHCl ₂ Br | | N.A. | N.A. | or |
| C ₂ Cl ₄ | | | | DAI (Sample) - |
| CHClBr ₂ | | | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.36 | | | |

Location, Region: Pembroke, S.E.

Source: Distribution System

Water Sample Number: 1465

Sampling Date: 2/7/81

| Date Analyzed (1981) | 28/7 ug/L | 30/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 96 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 2 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 31 | 32 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 100 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 67 | 70 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 65 | 68 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 0 | -- | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.43 | 98 | | 1.46 |

Location, Region: Township of Percy, Central

Source: Distribution System

Water Sample Number: 1596

Sampling Date: 22/7/81

| Date Analyzed (1981) | 10/8 ug/L | 12/8 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 170 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 8 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 30 | 18 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 3 | 38 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 137 | 81 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 5 | 62 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 140 | 82 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 5 | 62 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.24 | 167 | 1.22 | |

Location, Region: Peterborough, Central

Source: Distribution System

Water Sample Number: 682

Sampling Date: 4/5/81

| Date Analyzed (1981) | 28/5 ug/L | 4/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|-------------------------|--|-------------------------------------|
| CHCl ₃ | 151 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 5 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 17 | 11 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 1 | 20 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 138 | 91 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 134 | 89 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 4 | 80 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | Sp. Volat. + DAI (Res.) | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. | |
| CHCl ₃ | 1.09 | 155 | 1.12 | |

Location, Region: Peterborough, Central

Source: Distribution System

Water Sample Number: 1091

Sampling Date: 1/6/81

| Date Analyzed (1981) | 16/6 ug/L | 18/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 141 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 6 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 8 | 6 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | ND | -- | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 101 | 89 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 133 | 94 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 6 | 100 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.40 | 109 | | 1.08 |

Location, Region: Peterborough, Central

Source: Distribution System

Water Sample Number: 1393

Sampling Date: 6/7/81

| Date Analyzed (1981) | 22/7 ug/L | 21/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 128 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 6 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 13 | 10 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 33 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 123 | 93 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 115 | 90 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 67 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.04 | 136 | | 1.11 |

Location, Region: Powasson, N.E.

Source: Distribution System

Water Sample Number: 1034

Sampling Date: 1/6/81

| Date Analyzed (1981) | 15/6 ug/L | 17/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 123 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 6 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 42 | 34 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 5 | 83 | or |
| C ₂ Cl ₄ | | 2 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 74 | 60 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 81 | 66 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 1 | 17 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.66 | 116 | | 1.57 |

Location, Region: Rainy River, N.W.

Source: Distribution System

Water Sample Number: 836

Sampling Date: 4/5/81

| Date Analyzed (1981) | 8/6 ug/L | 10/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 157 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 5 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 47 | 30 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 102 | 65 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 2 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 110 | 70 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 60 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.54 | 149 | | 1.46 |

Location, Region: Rainy River, N.W.

Source: Distribution System

Water Sample Number: 1222

Sampling Date: 2/6/81

| Date Analyzed (1981) | 23/6 ug/L | 25/6 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 142 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 7 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 42 | 30 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 43 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 94 | 66 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 14 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 100 | 70 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 57 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.51 | 136 | | 1.45 |

Location, Region: Rainy River, N.W.

Source: Distribution System

Water Sample Number: 1505

Sampling Date: 13/7/81

| Date Analyzed (1981) | 17/8 ug/L | 10/8 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 159 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 5 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 49 | 31 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 3 | 60 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 114 | 72 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 110 | 69 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 2 | 40 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.39 | 163 | 1.43 | |

Location, Region: Smith Falls, S.E.

Source: Distribution System

Water Sample Number: 1462

Sampling Date: 6/7/81

| Date Analyzed (1981) | 28/7 ug/L | 30/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 232 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 11 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 25 | 11 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 55 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 227 | 98 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 3 | 27 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 207 | 89 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 5 | 45 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.02 | 252 | | 1.11 |

Location, Region: Thunder Bay, N.E.

Source: Distribution System

Water Sample Number: 1588

Sampling Date: 8/7/81

| Date Analyzed (1981) | 7/8 ug/L | 11/8 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|-------------------|--------------------------------|--------------------------------|-------------------------------------|
| CHCl ₃ | 308 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 4 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 41 | 13 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 1 | 25 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 225 | 73 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | ND | -- | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 267 | 87 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 3 | 75 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | <u>Sp. Volat. + DAI (Res.)</u> | |
| | Sp. Volat. | | Sp. Volat. | |
| CHCl ₃ | 1.37 | 266 | 1.18 | |

Location, Region: Vermillion Bay, N.W.

Source: Distribution System

Water Sample Number: 828

Sampling Date: 4/4/81

| Date Analyzed (1981) | 14/7 ug/L | 9/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------------|--|
| CHCl ₃ | 112 | | 100 | |
| C ₂ HCl ₃ | 0 | | | DAI (Sample) |
| CHCl ₂ Br | 6 | | 100 | or |
| C ₂ Cl ₄ | 0 | | | "Total" Organohalides |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 42 | 37 | |
| C ₂ HCl ₃ | | 0 | | DAI (Residue) |
| CHCl ₂ Br | | 3 | 50 | or |
| C ₂ Cl ₄ | | 0 | | "Non-Volatiles" |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 77 | 69 | |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 17 | Sparged Volatiles |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 70 | 63 | |
| C ₂ HCl ₃ | | 0 | | Volatiles by "Difference" |
| CHCl ₂ Br | | 3 | 50 | or |
| C ₂ Cl ₄ | | 0 | | DAI (Sample) - |
| CHClBr ₂ | | 0 | | DAI (Residue) |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.45 | 119 | | 1.55 |

Location, Region: Victoria Harbour, Central

Source: Distribution System

Water Sample Number: 868

Sampling Date: 6/5/81

| Date Analyzed (1981) | 14/7 ug/L | 9/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 86 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 7 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 55 | 64 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 86 | |
| C ₂ Cl ₄ | | 3 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 32 | 37 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 14 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 31 | 36 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 14 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 2.69 | 87 | | 2.72 |

Location, Region: Victoria Harbour, Central

Source: Distribution System

Water Sample Number: 1381

Sampling Date: 6/7/81

| Date Analyzed (1981) | 16/7 ug/L | 20/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------|--|
| CHCl ₃ | 102 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 10 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 31 | 30 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 6 | 60 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 65 | 64 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 71 | 70 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 4 | 40 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.57 | 96 | | 1.48 |

Location, Region: Wanapitei, N.E.

Source: Distribution System

Water Sample Number: 1548

Sampling Date: --

| Date Analyzed (1981) | 23/7 ug/L | 28/7 ug/L | % of DAI (Sample) | Procedure Used or Fraction Analyzed |
|---------------------------------|---------------------------------|--------------------------------|-------------------------|--|
| CHCl ₃ | 77 | | 100 | DAI (Sample) or "Total" Organohalides |
| C ₂ HCl ₃ | 0 | | | |
| CHCl ₂ Br | 2 | | 100 | |
| C ₂ Cl ₄ | 0 | | | |
| CHClBr ₂ | 0 | | | |
| CHCl ₃ | | 17 | 22 | DAI (Residue) or "Non-Volatiles" |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 64 | 83 | Sparged Volatiles |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| CHCl ₃ | | 60 | 78 | Volatiles by "Difference" or DAI (Sample) - DAI (Residue) |
| C ₂ HCl ₃ | | 0 | | |
| CHCl ₂ Br | | 1 | 50 | |
| C ₂ Cl ₄ | | 0 | | |
| CHClBr ₂ | | 0 | | |
| | <u>DAI (Sam.)</u> Sp. Volat. | <u>Sp. Volat. + DAI (Res.)</u> | | <u>Sp. Volat. + DAI (Res.)</u> Sp. Volat. |
| CHCl ₃ | 1.20 | 81 | | 1.27 |

Abstract

A study was made aimed at determining haloforms in drinking water by the fast and efficient DAI method opposite the much slower and more complex Sparging method. By using water samples with relatively high chloroform levels, the extent by which the DAI over-estimates the free chloroform concentration was investigated. From the results it was concluded that the DAI method is applicable for all drinking water samples with chloroform levels up to 300 ug/L. For samples found at or exceeding this limit, a suitable method must be used for accurately determining whether the free trihalomethanes indeed exceed the Ontario guideline for haloform concentrations in drinking water.

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